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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/701,095	11/22/2000	Toyotaro Tokimoto	TOKIMOTO ET AL PCT	6201

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COLLARD & ROE, P.C.
1077 NORTHERN BOULAVARD
ROSLYN, NY 11576

EXAMINER

BRIER, JEFFERY A

ART UNIT	PAPER NUMBER
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2672

DATE MAILED: 09/10/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/701,095

Applicant(s)

TOKIMOTO ET AL.

Examiner

Jeffery A. Brier

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The amendment filed on 08/04/03 has been entered. Claims 2-9 were amended, claim 10 was added and claim 1 was cancelled.

Response to Arguments

2. Applicant's arguments filed 08/04/03 have been fully considered but they are not persuasive.
3. On pages 9-13 applicant provides a summary of applicants invention and the Phan reference.
4. On pages 13-14 applicant alleges that Phan does not teach the claimed invention. The argument in the first full paragraph is incorrect because each pixel is addressed thus the data is mutually shifted in position and partially overlap one another so a pixel by pixel line by line addressing will occur. The argument in the paragraph addressing paragraph (a)(2) of claim 10 is incorrect because the image data to be displayed on the screen is multi-color data of a bitmap format (*each pixel of the matrix is driven thus a bit map format is present*), in which one pixel is expressed by a gathering of first color data, second color data and third color data (*each pixel 17 is formed of a red pixel, a green pixel and a blue pixel*). The argument in the paragraph spanning pages 13-14 addressing paragraphs (b) through (g) of claim 10 is incorrect because Phan:

divides the first, second, and third color data planes into a plurality of data groups corresponding to the dynamic pixels,

makes each data group (*dynamic pixel 18 for each static pixel*) correspond to each of the lamps in the display screen, and

activates each lamp according to a selected piece of data (*the red, the green or the blue*) contained in each data group.

The argument on page 14 in the first full paragraph is not persuasive since it is not present in the claim. Additionally Phan teaches this argument since Phan does disclose a structure in which the positions of the data group of the first, second, and third colors are mutually shifted (*red, green and blue static pixels are shifted and the dynamic pixels are shifted and overlap*) but partially overlap one another, and in which the positions thereof interrelate with (i.e., correspond to) the positions of the lamps of the first, second, and third colors on the display screen.

5. In the paragraph spanning pages 14 to 15 applicant advises the Examiner that the Japanese Examiner approved that the present application was neither anticipated by nor obvious over Phan. The claims approved by the Japanese Examiner are not known to this Examiner and Japanese patent law is different than US patent law in many aspects, thus, further comment with regard to this assertion is not necessary.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

7. Claims 10, 2, and 5-9 are rejected under 35 U.S.C. 102(a) as being anticipated by German Patent, DE 197 46 329 A1, to Gia Chuong Phan. A machine translation of this document into English was enclosed with paper no. 6. A detailed analysis of claim 10 follows.

Claim 10:

Phan teaches a method for displaying bitmap (*figures 2a and 2b shows a bit map image formed from red, green and blue pixels*) multi-color image data on a dot matrix-type display screen on which three primary color lamps (*LEDs*) are dispersedly arrayed (*the LEDs are arrayed in a matrix, thus, they are dispersedly arrayed*), which comprises the following steps:

(a) providing a display screen for display of image data comprising an even array (*figure s 2a and 2b shows an even number of rows and columns, thus, and even array is shown*) of a plurality of pixel lamps in a regular pattern (*the matrix pattern is a regular pattern*), wherein

(1) the pixel lamps are three kinds of color lamps (*red, green and blue*) which are a first color lamp, a second color lamp, and a third color lamp, and these three kinds of pixel lamps being evenly dispersed on the display screen; and

(2) the image data to be displayed on the screen is multi-color data of a bitmap format (*each pixel of the matrix is driven thus a bit map format is present*), in which one pixel is expressed by a gathering of first color data, second color data and third color data (*each pixel 17 is formed of a red pixel, a green pixel and a blue pixel*);

(b) dividing a first color data plane (*the data for the red pixel are the first color data plane*) on a bitmap image data plane into a plurality of groups (*each dynamic pixel 18 is a group*) wherein each group (*dynamic pixel 18*) is composed of a plurality of pixels (*each dynamic pixel 18 has several red pixels applied to the static red pixel sequentially*) arranged adjacently to each other, each group being made to correspond to each first color lamp (*red LED*) on the display screen;

(c) dividing a second color data plane (*the data for the green pixel are the second color data plane*) on a bitmap image data plane into a plurality of groups (*each dynamic pixel 18 is a group*) wherein each group (*dynamic pixel 18*) is composed of a plurality of pixels (*each dynamic pixel 18 has several green pixels applied to the static green pixel sequentially*) arranged adjacently to each other, each group being made to correspond to each second color lamp (*green LED*) on the display screen;

(d) dividing a third color data plane (*the data for the blue pixel are the third color data plane*) on a bitmap image data plane into a plurality of groups (*each dynamic pixel 18 is a group*) wherein each group (*dynamic pixel 18*) is composed of a plurality of pixels (*each dynamic pixel 18 has several blue pixels applied to the static blue pixel sequentially*) arranged adjacently to each other, each group being made to correspond to each third color lamp (blue *LED*) on the display screen;

(e) repeatedly selecting, in a specific order at high speed (*100 HZ, column 3 lines 15-20*), the first color data (*red*) of a plurality of pixels (*red, green and blue*) that belong to one group (*dynamic pixel 18*) of the plurality of groups of the first color data plane and activating the first color lamp corresponding to each group to emit light according to the selected first color data (*using figure 2b as an example the red pixel in the third row and third column has four dynamic pixels 18 whose red pixel values are sequentially applied to that particular red pixel*);

(f) repeatedly selecting, in a specified order at high speed (*100 HZ, column 3 lines 15-20*), the second color data (*green*) of a plurality of pixels (*red, green and blue*) that belong to one group of the plurality of groups of the second color data plane and activating the second color lamp corresponding to each group to emit light according to the selected second color data (*using figure 2b as an example the green pixel in the third row and second column has four dynamic pixels 18 whose green pixel values are sequentially applied to that particular green pixel*); and

(q) repeatedly selecting, in a specified order at high speed (*100 HZ, column 3 lines 15-20*), the third color data (*blue*) of a plurality of pixels (*red, green and blue*) that belong to one group of the plurality of groups of the third color data plane and activating the third color lamp corresponding to each group to emit light according to the selected third color data (*using figure 2b as an example the blue pixel in the second row and second column has four dynamic pixels 18 whose blue pixel values are sequentially applied to that particular blue pixel*);

wherein the first color data plane (*red plane*), the second color data plane (*green plane*), and the third color data plane (*blue plane*) are grouped so that the groups are mutually positionally-shifted on the bitmap image data plane (*figures 2a and 2b illustrate how the bitmap image is positionally shifted on the bitmap image data plane*) while being partially overlapped (*the green and blue pixels of the static pixels are partially overlapped with the red static pixels and the dynamic pixels 18 are partially overlapped*), intersecting with a positional-shift in the arrays of the first color lamp, the second color lamp, and the third color lamp on the display screen (*the red, green and blue pixels of the static pixels are interspersed by a positional shift in the arrays*).

Claim 2:

Figure 2b shows four pixels constituting one of the groups.

Claim 5:

Each of the green, red, and blue LEDs of static pixel 17 are overlapped by the corresponding green, red, and blue LEDs of the four dynamic pixels.

Claim 6:

This claim claims groups having the same color do not partially overlap, applicant must be claiming here, how groups distant from the current pixel do not affect the current pixel, which is also taught by Phan.

Claim 7:

The corresponding LED of the four LEDs are unified into one corresponding LED of the static pixel.

Claim 8:

At the boundaries for, according to figures 2a and 2b, less than four dynamic pixels covers a static pixel.

Claim 9:

Figures 2a, 2b and 5 illustrate this claim. Inherently an activating section exists for activating the LEDs. Inherently an image data storing section exists for storing the bitmap to be displayed. Control 19 is the claimed data distribution control section.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over German Patent, DE 197 46 329 A1, to Gia Chuong Phan.

Claim 3:

This claim claims nine pixels for the dynamic pixel while Phan clearly teaches 1, 2 or 4 pixels forming the dynamic pixel. More pixels would be desirable if more color resolution is desired. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have nine pixels form the group so increased color resolution is generated.

Claim 4:

This claim claims sixteen pixels for the dynamic pixel while Phan clearly teaches 1, 2 or 4 pixels forming the dynamic pixel. More pixels would be desirable if more color resolution is desired. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have sixteen pixels form the group so increased color resolution is generated.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffery A. Brier whose telephone number is (703) 305-4723. The examiner can normally be reached on M-F from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi, can be reached at (703) 305-4713).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Art Unit: 2672

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



Jeffery A Brier
Primary Examiner
Art Unit 2672